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ABSTRACT

Previous research has stressed the role of both expectancies and reinforcement in the decision making process. In order to determine if the measure of externality and internality correlates with an association between willingness to risk and external/internal locus of control, and to determine the role of social learning in students internal/external characteristics, educational psychology students (N=42), aged 24-40, completed the Adult Nowicki-Strickland Internal External (I/E) Scale and the Wesley Willingness to Risk Questionnaire (WRQ). Analyses of results showed that both male and female facilitators (defined as students who tended to answer no to external items) had significantly higher total I/E and WRQ scores, i.e., were more internal than their inhibitor counterparts, (students who answered no to most risk questionnaire items). The results suggest that academic performance might be enhanced by arranging situational factors in a way that the student will view his success or failure as contingent upon his own behavior. The two scales are appended. (WAS)

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CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

A STUDY OF THE RELATION BETWEEN LOCUS OF CONTROL AND RISK TAKING FOR GRADUATE STUDENTS IN EDUCATION

A thesis submitted in partial satisfaction
of the requirements for the degree
of Master of Arts in Education,

Educational Psychology,
Counseling and Guidance

by

Raymond Joseph Gutierrez

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May, 1982

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TABLE OF CONTENTS

Page

ACKNOWLEDGEMENTS iii

LIST OF TABLES vi

LIST OF FIGURES vii

EXPLANATION OF PROJECT viii

ABSTRACT ix

Chapter

1. INTRODUCTION 1

Introduction and Objective 1

Hypotheses 2

The Problem 3

Purpose of the Study 4

Definition of Terms 4

2. RELATED RESEARCH 7

Value Studies in Internal-External Locus of Control . . . 7

Literature on the Values of I.E. and WRQ 12

Risk-Taking 13

Summary 15

3. METHODOLOGY 16

Population Sample 16

Subjects 16

Instrumentation and Procedure 17

Chapter

Page

Analysis of the Data 17

4. RESULTS/IMPLICATIONS 19

Results 19

Characteristics of Participants . . . 21

5. DISCUSSION/CONCLUSIONS 28

BIBLIOGRAPHY 31

APPENDICES

A PERMISSION LETTER FROM ETS TEST COLLECTION 34

B INTERNAL-EXTERNAL LOCUS OF CONTROL QUESTIONNAIRE 36

C WILLINGNESS TO RISK QUESTIONNAIRE 40

D RESEARCH INVESTIGATION CONSENT FORM . . . 45

LIST OF TABLES

Table		Page
1	Mean Score of Graduate Students	20
2	Raw Scores of Female Participants on Willingness to Take Risks Questionnaire (WRQ) and Lie Items	25
3	Relating Internal-External Locus of Control to Willingness to Risk Score (Establishing Correlation)	26
4	Raw Scores of Male Graduate Students	27

LIST OF FIGURES

Figure		Page
1	Overall Scatterplot Scores for Graduate Students Correlated with (WRQ) and (I.E.)	22
2	Responses on Internal-External Locus of Control Correlated with Willingness to Risk by Male Graduate Students	23
3	Scatterplot of Responses or Willingness to Take Risk with "Lie Items" on WRQ Questionnaire	24

EXPLANATION OF PROJECT

The emergence of locus of control studies has prompted me to choose this particular project, and has raised various issues concerning the value and function of expectancy and reinforcement. This study was to determine whether students willing to take risks are more likely to exhibit a greater tendency for internal locus of control. Analysis of collected data will be indicated by tables and several scatter plots in the conclusion. A copy of the questionnaires used in the study is included, as well as a review of related research on internal-external (I.E.) locus of control and risk taking (WRQ). The ninety-five-item instrument was presented to the students as an action and opinion survey.

ABSTRACT

A STUDY OF THE RELATION BETWEEN LOCUS OF CONTROL AND RISK TAKING FOR GRADUATE STUDENTS IN EDUCATION

by .

Raymond Joseph Gutierrez

Master of Arts in Education, Educational Psychology, Counseling and Guidance

This study is an exploration of an association between willingness to risk and external-internal locus of control. Do past experiences of failure affect the decision-making process or are values embedded firmly in social learning experiences which stress the roles of both expectancies and reinforcement? Research suggests that students willing to take risks show significant tendencies toward internality in their orientation (80% to 90% "valid") and low-risk achievers perceive themselves as less able persons than do high risk achievers. Sample items from the Willingness to Risk and Internal-External Control Scale for Adults, and the Validation for these

scales are provided in the Appendix. The implications of these results are discussed. Also, abstracts of some of the most significant studies dealing with the nature of locus of control and risk-taking are included in an Appendix.

Chapter 1

INTRODUCTION

Introduction and Objective

Studies of locus of control continue to grow in popularity and use. This study is to: (a) measure the association or commonality between willingness to risk and locus of control; (b) utilize a Pearson's product-moment correlation coefficient to determine the statistical results of these two variables; (c) determine the rationale or logical link between risk taking and internal consistency; (d) determine if the locus of control of the student and instructional approaches interact to enhance or impede academic progress. The investigator maintains that graduate students are more likely to take risks insofar as they defy environmental control, i.e., fate, luck, chance or the influrence of powerful others. Nowicki and Strickland, et al. (1972) found a measure of control that purports to be independent of social desirability or intelligence and would therefore validate to some degree the students' internal-external control orientation. Refer to the following description of Rotter and Wesley's test interpretation:

(Internal-external control scale) Rotter (1966) found that "when a reinforcement is perceived by the

subject as following some action of his own but not being entirely contingent upon his action, then in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual, we have labeled this a belief in external control. If the person perceives that the event is contingent upon his own behavior on his relatively permanent characteristics we have termed this a belief in internal control" (p. 1).

(Willingness to risk questionnaire: Form A)

Wesley (1967) stated that "High risk subjects were willing to take more chances with their lives and with social embarrassment than were low risk subjects.

Hypothesis

The present study was designed to test the following hypotheses:

1. There is a significant correlation between willingness to risk and locus of reinforcement.

2. There is a significant relationship between willingness to take risk and honesty in responding to the WRQ.

The reason for the use of questionnaires in this study is to select people (graduate students) who would,

after due consideration answer highly on the willingness to take risks items and would tend to score toward internality on the locus of control scales. On the basis of these criteria, the academic and social backgrounds of the graduate students would lead us to believe that: (1) the decision-making process is highly affected by the student's past experiences; that is, infancy, adolescence, and education; (2) the relationship between risk taking and locus of control is value (culture) related and together support the notion that the development of student's self-concept can be masured by completing these tests.

The Problem

This study was conducted to utilize a reliable and valid scale to measure the opinions and actions of graduate students in educational psychology toward risk-taking (WRQ) and internal-external locus of control (I.E.).

First, it was necessary to review the general objectives of risk-taking and locus of control, and to select questionnaires for the statements to be used in the (WTQ) - (I.E) statements had to be evaluated to determine which statements were: (1) answering in the high risk or internal direction and (2) were determined

by the impact of a social learning theory which stresses the role of both expectancy and reinforcement.

Purpose of the Study

Because of the foregoing research findings relative to the decision-making process and values embedded firmly in a social learning theory, which stresses the role of both expectancies and reinforcement, this study sought to answer the following questions: (1) Is the measure of externality and internality correlated with an association between willingness to risk and external-internal locus of control? and (2) What are the implications of a social learning theory upon the student's internal and external characteristics?

Definition of Terms

The following terms were defined for the purpose of this study.

1. Expectancy "May be defined as the probability held by the individual that a particular reinforcement will occur as a function of a specific behavior on his part in a specific situation or situations. Expectancy is systematically independent of the value or importance of the reinforcement" (Rotter, 1972, p. 12).

2. Externality "is the belief that factors such as fate, chance, luck or powerful others are more

important than personal efforts in controlling one's environment" (Roueche, 1976, p. 69).

3. Facilitators were defined as "students who answered no to items such as: (1) are some people just born lucky? or yes to (2) do you believe that parents should allow children to make most of their own decisions?" Items answered in this manner are believed to be answered in the external direction (I.E. Scale).

4. Inhibitors were defined as "students who answered N- never to items such as: (1) Have you ever run a red light? or N - never to (2) Have you ever gambled on anything? (RISK Scale).

5. Internality "is characterized by the belief that a person's actions, abilities, characteristics or such are effective in controlling reinforcements received from the environment."

6. Locus of Control Scale "measures the degree to which people perceive the events in their lives as being largely the consequence of their own actions, and thus under their own control (internal control), or as being largely unrelated to their own behavior and thus beyond their own personal control (external control)" (Wolman, 1977, p. 443).

7. Personality Theory "is not viewed as a set of internal characteristics which the individual carries around with him from situation to situation, but rather

as a set of potentials for responding to particular kinds of social situations" (Rotter, 1975, p. 94).

8. Social Learning Theory "Social learning theory holds that most behavior is learned in a social situation and is fused with needs that are largely satisfied through other people" (Wolman, 1977, p. 443).

9. "Risky Shift" "A cultural value viewpoint which investigators contend is "imminently' rational; to others, the phenomenon reflects the consequences of counterrational bias in group decision making" (Wolman, 1977, p. 466).

10. X, represents the independent variable (I.E.), which is manipulated by the investigator; it will also be referred to as the experimental variable or the treatment.

11. Y, is used to represent the measure of the dependent variable (WRQ). Y_1 represents the dependent variable before the manipulation of the independent variable X; it is often measured on a pretest of some type administered before the experimental treatment, which in turn is preceeding a post-test measure of the variable.

Chapter 2

RELATED RESEARCH

This chapter presents a review of literature on the values of risk-taking (WRQ) and internal-external locus of control (I.E.). The review of literature is divided into two parts: (1) value studies related to I.E.-WRQ and (2) literature on the values of I.E. and WRQ.

Value Studies in Internal-External Locus of Control

Rotter (1966) found the following:

> [The] effect of a reinforcement following some behavior on the part of a human subject, in other words, is not a simple stamping-in process but depends upon whether or not the person perceives a causal relationship between his own behavior and the reward. When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him--when the event is interpreted in this way by an individual, we have labeled this a belief in external control. If the person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this a belief in internal control.

The idea of internal-external control of reinforcement has been the subject of research during the last decades.

In the review of various value studies of internal-external locus of control development, the Rotter (1972) and Strickland (1972) method was found to be used most frequently in the field of psychology. Using the Rotter technique for developing her measuring instrument, Strickland (1972) found the Rotter scale to be "a useful instrument for the prediction of social action" (p. 375). Moreover, the implications of the research in regard to identifying variables, such as internality-externality underlie behavioral commitment. The behavioral commitment is seen by Allen (1977) to manifest itself in one's teaching style, i.e., "to decide upon a teaching role the instructor needs to consider certain characteristics of the prospective student" (p. 104). The rationale, then, clearly implies that the nature of reinforcement in individuals would differ in the degree to which they attribute reinforcements to their own actions. Baron, Dion, and Miller (1971) found group consensus and cultural values to be determinants of "risk taking" insofar as they support the cultural value explanation of locus of control. The link between locus of control and risk taking is seen by Nowicki-Strickland (1972) to be consistent with social learning theory in the selected areas of psychological maladjustment, race, and achievement (p. 3).

If a measure of a construct has been found to reflect theoretical assumptions accurately regarding that

construct, then this measure has gained some degree of construct validation. It follows, then, that perhaps a newer measure, i.e. (risk-taking) could also gain some degree of construct validation by showing empirical relationships similar to those found with the more established measure and by reflecting implied theoretical relationships.

To this end studies in which locus of control is related to risk-taking behavior will support the construct validity of the Wesley scale. In the instances where living conditions dictate behavior and reinforcement is in the hands of powerful others, minorities, i.e., Blacks, Chicanos, or indigents would respond in a more external manner than whites. To support this, Rotter (1972) found the following: "What must also be considered are his generalizations from related past experiences. His generalization of expectancies may, or may not, match those an observer might infer to be present" (p. 24).

In administering the (I.E.) and (WRQ) scale to Educational Psychology students (graduates) it is assumed that a high-risk and high-internal score will prevail, because of the related past experiences of the graduates, i.e., middle or upper-middle class and white. Of course, the above statement is a broad generalized expectancy, only owing to the presumption that differing attitudes

seemingly exist among the social classes, personality characteristics of the individual, or social approval.

Social learning theory holds that most behavior is learned in a social situation and is fused with needs that are largely satisfied through other people, meaning that the role of both expectancy and reinforcement are contingent upon the expressed beliefs and attitudes of one's environment such as, parental, educational, economic, special position or, restrictive, limitative and modifying circumstances (external). Therefore one's past experiences lend one to believe that the individual carries around with him a set of potentials for responding to particular kinds of social situations he has learned.

Rotter (1972) found that "in many instances one's true or internal beliefs will correlate with socially approved beliefs since what one believes to be true may well be a reflection of what others believe to be true" (p. 342). From this point of view, the many studies of reinforcement effects and reactions on an individual's expectations seem directly correlated with his social situation and upbringing. To support these points of view, Keller (1974) found that "internality tends to be related to parental behaviors which contribute to good judgment" (p. 10).

It is interesting to note that the existing literature could be used to show that a respondent's

reactions to particular social situations could be either internal or external depending upon the study cited. Buriel (1980) found "significant variations in the relation of parents' teachers' socialization behaviors to children's locus of control scores as a function of both children's and adults' sex and ethnicity." This statement would further support Rotter's (1972) notion that one's internal beliefs may well be a reflection of what others (parents in this case) advocate to their children (p. 78).

Consider, for example, the impact of social learning theory in colleges, universities, business enterprises and the media. In all of these organizations the compliance relationship will vary, due to organizational structure, the dispersion of decision-making, the extent of conventional controls and the kind of leadership required. In support of conventional controls upon the individual Corson (1979) found that "authority is the character of a communication (order) by which it is accepted as controlling by those who are expected to obey" (p. 6). Corson's findings simply foster the notion that the individual's decision-making process is influenced by the locus of control of outside factors.

Literature on the Values of I.E. and WRQ

Studies (Rotter, Chance, and Phares, 1972) have shown the greater range of variability among external subjects, particularly in male populations. It was hypothesized that those who believe in fate, luck, chance and the influence of powerful others would be more likely to assume a conspiracy covered up by the Warren Report. Conversely, those who believe the events in their lives as the results of consequences of their own actions would respond with greater belief to the assertion of the Warren Commission that their report contain "full and truthful knowledge" of the facts of the assassination of President John Kennedy (p. 353). To further substantiate predictions of social action from a dimension of internal-external control Rotter, et al. (1972) found the following: (1) "Those individuals who are inclined to see themselves as determiners of their own fate tend to commit themselves to personal and decisive action," (2) the "need-for-approval motive showed weak trends across the degree of social action, with the higher-need-for-approval subjects less likely to verbalize willingness to become involved in civil rights action," and (3) it "is hypothesized that persons engaged in social action are characterized as more internal than a comparable group of persons who are not involved" (p. 372).

Risk-Taking

The ideals that are elicited by risk-taking are many and varied, the research findings as to their efficiency are voluminous, but indecisive. Cartwright (1971, pp. 361-365) stated, "The field therefore faces a theoretical crisis. The central task for theory is not to explain 'the risky shift', but to account for the much more complicated effects of group discussion.

The effects of group discussion increase the subject's familiarization with the choice dilemmas items and thus enable him to make a better, more rational decision. Also to be considered is the assumption that a "cultural value" exists which favors risk over conservatism in some situations and conservatism over risk in others. In respondents of this study, the group is well defined as being selected from a university graduate school, and the assumption is, that the students will score toward internality, because of their familiarization with the subject values and decision-making process.

Watson (1971) found that "the performance and morale of group members were hypothesized to be a function of the reinforcements available within the group, which is determined by the group structure, and of the responsiveness of the individual members to certain categories of reinforcers, which is delineated by personality

measures" (p. 1). The preceding statement would imply that because of the group's structure, the investigator could yield certain responses (if he so wished) from selecting only those which he felt would select the correct number of responses, i.e., control of the variable of value elicited.

In reviewing the related research of I.E. and WRQ we find a direct relation of attitudes embedded firmly in a social learning theory, which stress both expectancies and reinforcement; i.e., most behavior is learned in a social situation and is fused with needs that are largely satisfied through other people.

The issue being considered then, is to orientate the families and educators to their own socialization processes (awareness) to foster a higher level of understanding cultural behavior. Vasquez (1978) found the following "The relationship between locus of control social class and learning processes . . . results suggest a classroom procedure for fostering internality through further examination of cause-effect relationships, aiding children in the formulation of goals in areas of perceived mastery, and providing opportunities for activities requiring internal attribution when success is achieved" (p. 1).

Summary

This study's main objective was to measure a relation between variables, i.e., the association of commonality of internal-external locus of control and willingness to take risks. The review of related research revealed that the concept of I.E. and WRQ are significantly related to one's past experiences or failures, which affect the decision-making process and hence, the instructional approach and attitudes of both student and teacher.

Chapter 3

METHODOLOGY

Population Sample

Subjects

Four classes of Educational Psychology students (total n = 42) from a four-year university in a suburb of Los Angeles, California were examined in the gathering of the psychometric data. The college students participated for non-credit in their Counseling/Guidance course. It was [only] speculated that they are members of the middle class. The college graduates were voluntary participants in a study of locus of control correlated with a willingness to risk questionnaire. Their ages ranged from approximately 24 to 40 years. All subjects were white.

Correlations and risk difference in the correlations between Nowicki-Strickland Internal-External (I-E) Control of Reinforcement Scale and the Wesley willingness to Risk Questionnaire (WRQ) were predicted based on a theoretical expectation of a relationship between I-E and willingness to risk. Both tests were administered to 30 female and 12 male college graduates. Correlation (Pearson's r) analyses indicated significant correlations (0.230) between I-E and WRQ scale. These findings have

implications for research using the I-E variable (refer to Table of "r Test Values for Correlation Coefficient" in the Appendix).

Instrumentation and Procedure

The Adult Nowicki-Strickland (I.E.) and Wesley (WRQ) scales were utilized to measure the students' autonomy and self-determination, as related to risk-taking and locus of control. The ranks or scores were derived from the answers given by the students, utilizing the binary method (involving two) of analysis. The instrumentation included the use of a linear regression and correlation analysis, which is fully explained in the scatterplot sections of this study. (Refer to sample sentences of both studies and the procedure for grading the students' self-concept.)

Analysis of the Data

The statistical computations were made according to correlational methods. The correlation coefficient r was applied to assess the individual differences between risk taking and locus of control. A graphic comparison (scatterplot) was utilized to illustrate the correlation problem. To simplify the comparison, the investigator obtained the means, standard deviations, and standard scores. The standard scores were obtained by subtracting

the mean from each raw score and dividing by the standard deviation. After the standard scores were obtained, it was very easy to compute the correlation coefficient (symbolized as r). First, the investigator multiplied the two standard scores for each person, added these and divided by the number of persons. The result is r, the correlation coefficient. The scatterplot diagram relating the standard scores was illustrated by multiplying standard scores on one measure with standard scores on the other.

Chapter 4

RESULTS/IMPLICATIONS

As we predicted, both male and female facilitators had significantly higher total I-E and WRQ scores (were more internal) than their inhibitor counterparts, i.e., low risk and external orientation items (see definition of terms).

Results

The results of this investigation showed a mean score of 44.2 for Group 1 (female) and a mean score of 43.58 for Group 2 (male).

A Pearson's product-moment correlation coefficient (r) was selected to analyze the data to test the development of a student's self concept. The correlation test was found to be "valid" at the 80% to 90% level of probability. Table 1 indicates mean and standard deviations for each sex.

Table 1

Mean Score of Graduate Students

	Group	N = 42	Mean	Standard Deviation
Male	1	12	43.58	9.62
Female	2	30	44.20	11.95

First, the test of correlation was based on 42 samples (N = 42), and Pearson's correlation coefficient, r, was computed to be 0.230. With 40 degrees of freedom, this correlation coefficient is significant at the .20 level, i.e., the degree of certainty that a moderate positive correlation exists between the two sets of data is greater than 80%.

Second, section 3 of the Locus of Control Scale and the Willingness to Risk Scale asked students to respond to a number of items in terms of the extent to which they considered each item characteristic of their actions or opinions. (Refer to Figure 2 for scatterplot interpretation.)

Third, five bogus "lie items" were also correlated with I.E. to signify validation of honesty or dishonesty from item responses. Refer to Figure 3 for scatterplot interpretation.

Fourth, experiment 2 indicated individual "raw scores" for (WRQ) and (WRQ) lie items. (Refer to Figure 2 for scoring and interpretation.)

Characteristics of Participants

Participants were all Educational Psychology students (N = 42) including 30 females and 12 males. Also, participants were speculated to be from a middle-class or upper-middle-class background, and Caucasian.

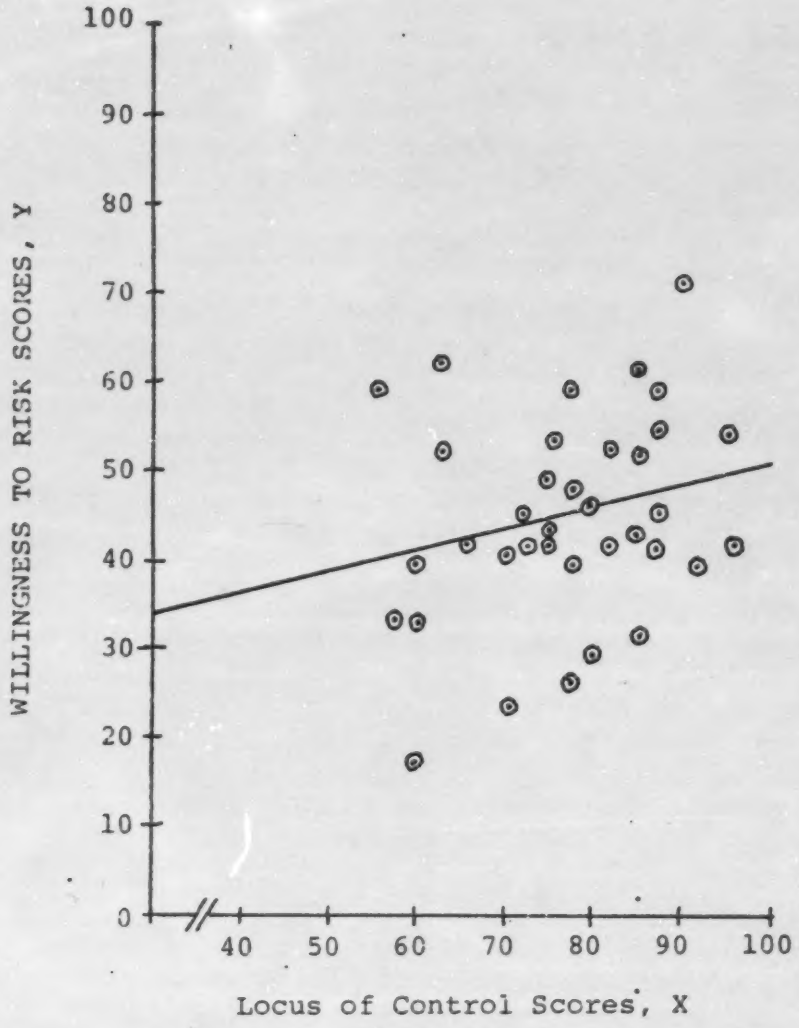

Figure 1. Overall Scatterplot Scores for Graduate Students Correlated with (WRQ) and (I.E.)

[a]The degree of certainty that a positive correlation exists between the two sets of data is between 80% and 90% (Refer to Table 6 for value scale).

[b]This correlation is significant at the .20 level.

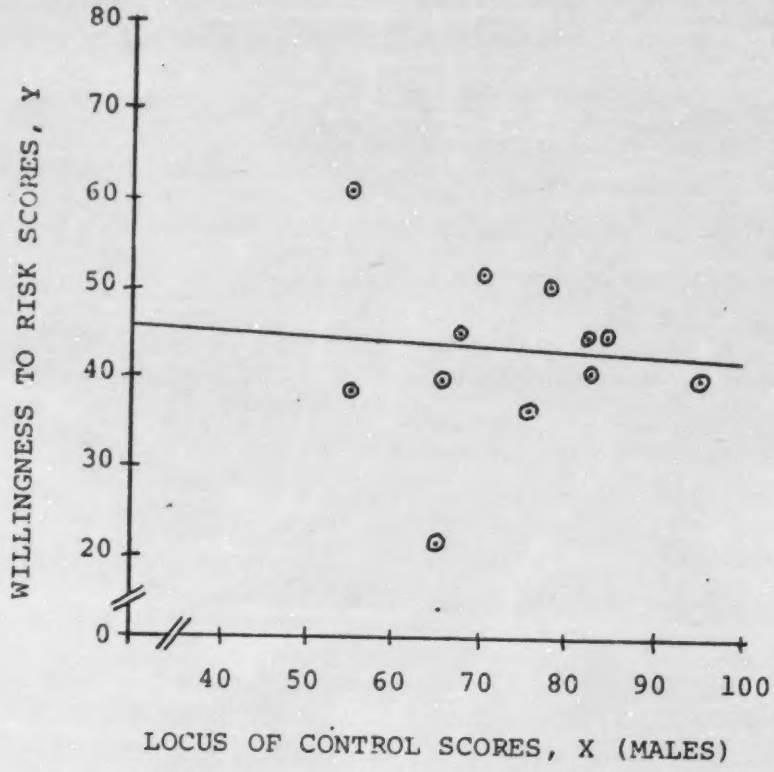

Figure 2. Responses on Internal-External Locus of Control Correlated with Willingness to Risk by Male Graduate Students

NOTE: $r = -0.054$

[a]Small population for males indicates slight negative correlations, i.e., inclusive correlation between willingness to risk and internal-external locus of control.

[b]X represents the independent variable (I.E.). Y is used to represent the measure of the dependent variable (WRQ).

[c]Refer to Table 4 for raw scores.

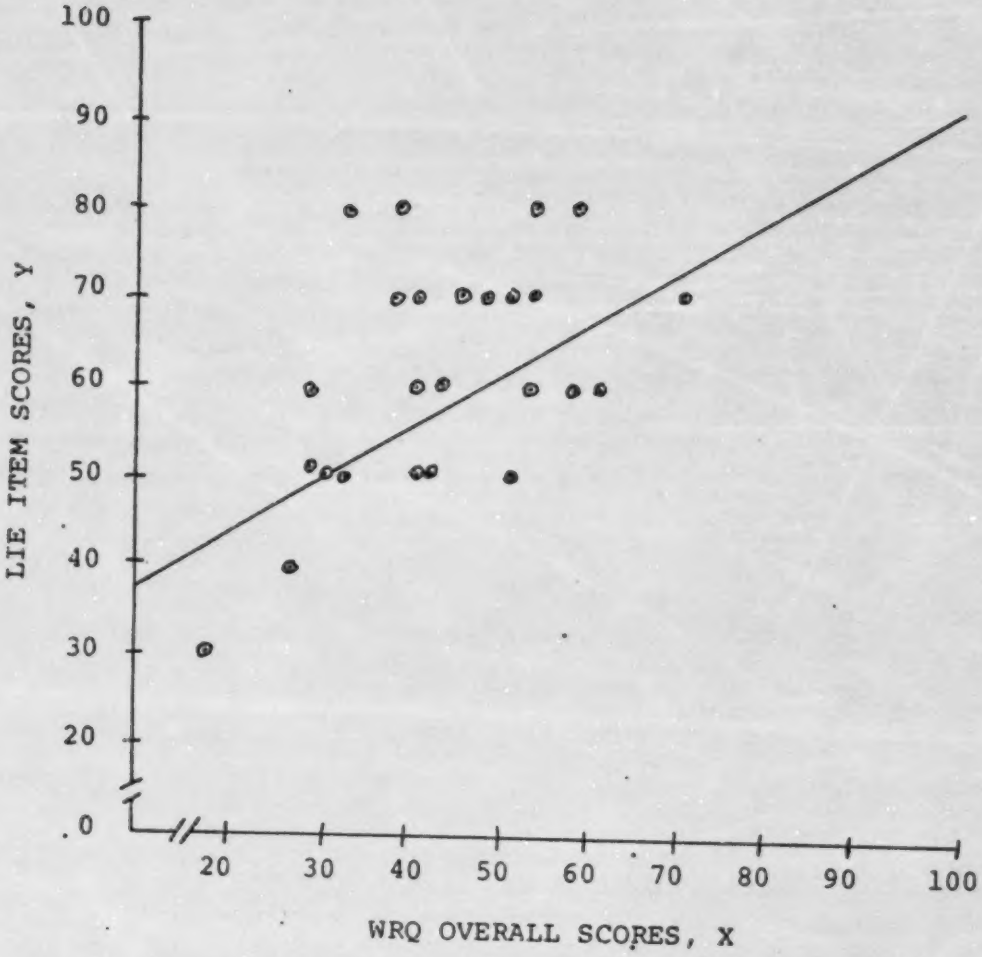

Figure 3. Scatterplot of Responses or Willingness to Take Risk with "Lie Items" on WRQ Questionnaire

[a]A correlation coefficient of 0.514 suggests that it can be said with a confidence level of between 99% and 99.9% that there iw a valid positive correlation between willingness to take risk and honesty in responding to the WRQ.

[b]The data of 99% and 99.9% are from M. Dean LaMont, 1977.

[c]Refer to Table 2 for raw scores.

[d]This correlation is significant at the .01 level.

Table 2

Raw Scores of Female Participants on Willingness to Take Risks Questionnaire (WRQ) and Lie Items

Females N = 30

(WRQ) Tests Raw Scores				
Subject Score				
13 - 41	20 - 43	27 - 41	34 - 52	41 - 31
14 - 39	21 - 41	28 - 41	35 - 33	42 - 54
15 - 59	22 - 49	29 - 39	36 - 46	
16 - 48	23 - 42	30 - 71	37 - 52	
17 - 41	24 - 17	31 - 54	38 - 29	
18 - 58	25 - 26	32 - 55	39 - 29	
19 - 43	26 - 58	33 - 33	40 - 61	

(WRQ) Lie Items				
Subject Score				
13 - 60	20 - 60	27 - 70	34 - 50	41 - 50
14 - 80	21 - 50	28 - 30	35 - 50	42 - 70
15 - 80	22 - 70	29 - 70	36 - 70	
16 - 70	23 - 50	30 - 70	37 - 70	
17 - 70	24 - 30	31 - 60	38 - 60	
18 - 60	25 - 40	32 - 80	39 - 50	
19 - 60	26 - 60	33 - 80	40 - 60	

NOTE. Maximum score = 100

[a]Numbers 13 through 42 indicate the number of females who completed all tests.

[b]One female in this group scored .71 on the risk questionnaire and .70 on the lie items.

Table 3

Relating Internal-External Locus of Control
To Willingness to Risk Score
(Establishing Correlation)

Table of "T_{Test}" Values--Test Values for
Correlation Coefficient

# of Samples	(df) Degrees of Freedom	80%	90%	95%	99%	99.9%
3	1	0.951	.988	.997	1.000	1.000
4	2	0.800	.900	.950	.990	.999
5	3	0.687	.805	.878	.959	.991
6	4	0.608	.729	.811	.917	.974
7	5	0.551	.669	.755	.875	.951
8	6	0.507	.621	.707	.834	.925
9	7	0.472	.582	.666	.798	.898
10	8	0.443	.549	.632	.765	.872
11	9	0.419	.521	.602	.735	.847
12	10	0.398	.497	.576	.708	.823
13	11	0.380	.476	.553	.684	.801
14	12	0.365	.457	.532	.661	.780
15	13	0.351	.441	.514	.641	.760
16	14	0.338	.426	.497	.623	.742
17	15	0.327	.412	.482	.606	.725
18	16	0.317	.400	.468	.590	.708
19	17	0.308	.389	.456	.575	.693
20	18	0.299	.378	.444	.561	.679
21	19	0.291	.369	.433	.549	.665
22	20	0.284	.360	.423	.537	.652
23	21	0.277	.352	.413	.526	.640
24	22	0.271	.344	.404	.515	.629
25	23	0.265	.337	.396	.505	.618
26	24	0.260	.330	.388	.496	.607
27	25	0.255	.323	.381	.487	.597
28	26	0.250	.317	.374	.479	.588
29	27	0.245	.311	.367	.471	.579
30	28	0.241	.306	.361	.463	.570
31	29	0.237	.301	.355	.456	.562
32	30	0.233	.296	.349	.449	.554
42	40	0.202	.257	.304	.393	.490
62	60	0.165	.211	.250	.325	.408
122	120	0.117	.150	.178	.232	.294

NOTE. The data in the above Table is from M. Dean LaMont.

Table 4

Raw Scores of Male Graduate Students

	Group	N = 12	(I.E.)		(WRQ)
Male	1	12	72.5	-	45
			87.5	-	41
			75	-	53
			70	-	23
			70	-	40
			87.5	-	45
			80	-	37
			60	-	39
			87.5	-	45
			82.5	-	52
			62.5	-	62
			95	-	41

NOTE. [a](I.E.), represents the independent variable X.

[b](WRQ), represents the measure of the dependent variable Y.

[c]r = -0.054

[d]Maximum score = 100

Chapter 5

DISCUSSION/CONCLUSIONS

Counselors/teachers should be aware of the Internal-External (I-E) state (situation with regard to circumstances) of the student, prior to meeting at the counseling table, especially when dealing with students with special needs. Corson (1979, p. 8), found the following:

> The manager who welds an organization together must reckon with human nature . . . they have Attitudes, Values, and Goals, and they have to be shown that the organization has attitudes, values, and goals consistent with their own. They are Decision Makers and Problem Solvers; they have a keen desire to make their own decisions, to solve problems as they deem best.

A number of relationships between variables regarding risk-taking and locus of control, show similar results in scoring, i.e., findings in the present study concur with their findings. Rotter (1975) found that "the understanding of personality requires a historical approach; the individual's behavior in the present is seen as influenced or shaped by the experiences he has had in his personal past" (p. 94). The present research on locus of control has tried to focus on the nature of the phenomenon itself and to show a relevance to educational decision making, even if it is not possible to

significantly alter an individual's predisposition towards attributing causality, academic performance might be enhanced by arranging situational factors such that it is difficult for the student to conclude other than that his success or failure is contingent upon his own behaviors, not upon external factors.

The validity of these conclusions is substantiated principally by the research findings (citations) of others, and by the administration of the I.E. and WRQ scale to the aforementioned graduate students.

Further conclusions show the scatterplot interpretation (Figure 1) to be a weak relationship, since the points are not tightly packed about the best-fit line. If the points are tightly packed about the best-fit line, then the correlation is high. In contrast, if the points tend to scatter very widely about the best-fit line, then the correlation is low.

The subject of attenuation (resulting state) may also be affected by various forms of bias. For instance, the respondent (student) may feel that the choice between the items is forced and unrealistic. This may produce negativistic reactions which could lead to unstable responses. Another possibility of error (low correlation in this matter) can be derived from the personality characteristics of the respondents than from the nature of the instrument, although the nature of the instrument can be

adapted to reduce the influence of these factors as far as possible.

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APPENDIX A

PERMISSION LETTER FROM ETS TEST COLLECTION

EDUCATIONAL TESTING SERVICE PRINCETON, N.J. 08541

609-921-9000

CABLE-EDUCTESTSVC

November 3, 1981

Ray Gutierrez
17736 Hatteras #39
Encino, CA 91316

Dear Mr. Gutierrez:

Today we received a copy of your letter addressed to Computer Microfilm International Corp. in Arlington, VA asking permission to use tests from the Tests in Microfilm collection in your dissertation.

No permission is necessary from us or the authors unless you change or adapt the instrument and then distribute or sell it yourself. Please feel free to use them. That is the purpose of the service of providing the tests to libraries - to make them available to others.

Please feel free to contact us for information at any time.

Sincerely,

Alicia Dodd
Assistant
Test Collection

APPENDIX B

INTERNAL-EXTERNAL LOCUS OF CONTROL

QUESTIONNAIRE

DIRECTIONS: The following items describe aspects of locus of control. Respond to each item according to the way you would be most likely to act.

Circle yes or no to the following questions.

Circle one for male or female. Male Female

KEY

(Y) 1. Do you believe that most problems will solve themselves if you just don't fool with them?

*(N) 2. Do you believe that you can stop yourself from catching a cold?

(Y) 3. Are some people just born lucky?

(N) 4. Most of the time do you feel that getting good grades meant a great deal to you?

(Y) 5. Are you often blamed for things that just aren't your fault?

(N) 6. Do you believe that if somebody studies hard enough he or she can pass any subject?

(Y) 7. Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway?

(Y) 8. Do you feel that if things start out well in the morning that it's going to be a good day no matter what you do?

(N) 9. Do you feel that most of the time parents listen to what their children have to say?

(Y) 10. Do you believe that wishing can make good things happen?

(Y) 11. When you get punished does it usually seem its for no good reason at all?

(Y) 12. Most of the time do you find it hard to change a friend's (mind) opinion?

(N) 13. Do you think that cheering more than luck helps a team to win?

KEY

(Y) 14. Did you feel that it was nearly impossible to change your parent's mind about anything?

(N) 15. Do you believe that parents should allow children to make most of their own decisions?

(Y) 16. Do you feel that when you do something wrong there's very little you can do to make it right?

(Y) 17. Do you believe that most people are just born good at sports?

(Y) 18. Are most of the other people your age stronger than you are?

(Y) 19. Do you feel that one of the best ways to handle most problems is just not to think about them?

(N) 20. Do you feel that you have a lot of choice in deciding whom your friends are?

(Y) 21. If you find a four leaf clover, do you believe that it might bring you good luck?

(N) 22. Did you often feel that whether or not you did your homework had much to do with what kind of grades you got?

(Y) 23. Do you feel that when a person your age is angry at you, there's little you can do to stop him or her?

(Y) 24. Have you ever had a good luck charm?

(N) 25. Do you believe that whether or not people like you depends on how you act?

(N) 26. Did your parents usually help you if you asked them to?

(Y) 27. Have you felt that when people were angry with you it was usually for no reason at all?

(N) 28. Most of the time, do you feel that you can change what might happen tomorrow by what you say today?

(Y) 29. Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them?

KEY

(N) 30. Do you think that people can get their own way if they just keep trying?

(Y) 31. Most of the time do you find it useless to try to get your own way at home?

(N) 32. Do you feel that when good things happen they happen because of hard work?

(Y) 33. Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters?

(N) 34. Do you feel that it's easy to get friends to do what you want them to do?

(Y) 35. Do you usually feel that you have little to say about what you get to eat at home?

(Y) 36. Do you feel that when someone doesn't like you there's little you can do about it?

(Y) 37. Did you usually feel that it was almost useless to try in school because most other children were just plain smarter than you are?

(N) 38. Are you the kind of person who believes that planning ahead makes things turn out better?

(Y) 39. Most of the time, do you feel that you have little to say about what your family decides to do?

*(N) 40. Do you think it's better to be smart than to be lucky?

* For the purposes of this study, students with an internal locus of control choose items (yes) such as "do you think its better to be smart than to be lucky?" or 'do you believe that you can stop yourself from catching a cold?"

Code: (Y) or (N) left of the question is an answer in the "external" direction. A score of 2.5 was given for answers opposite the key.

The 40 I-E Items - Developed by Nowicki, S., and Strickland, B. R., 1972.

APPENDIX C

WILLINGNESS TO RISK QUESTIONNAIRE

DIRECTIONS: On the following questions, you may not have been exposed to many of the experiences. In this event, please answer the question as though you have had the chance to indulge in the particular behavior in question.

For example, if you have never driven a car, you would have to answer many of the questions "never" because of the lack of experience. Do not answer on this basis. Instead answer each question as though you have had the experience or have had a chance to have the experience.

Circle the letter that best reflects your answer.

CODE: N - Never S - Seldom F - Frequently

Circle one for male or female. Male Female

1. Have you ever run a red light?
2. Did you ever leave your door unlatched at night?
3. Have you ever played cards for money?
4. Have you ever been purposely late for work or for class?
5. Did you ever leave home without your raincoat and overshoes when the weather looked threatening?
* 6. Have you ever gambled on anything?
7. Have you ever walked against a green light?
8. In taking a long trip, did you ever drive at night?
9. Did you ever bet on ball games?
10. Have you ever guessed on an examination?
11. Have you ever slept in a draft?
*12. Have you ever broken a rule?
13. Have you ever exceeded the speed limit?
14. Have you ever walked along a busy thoroughfare on the wrong side of the street--i.e., with the traffic approaching from your rear?

15. Have you ever been on an out-of-town trip with just enough money to get you there and back?

16. Have you ever tried a new sport in a crowd?

17. Have you ever gone for more than three days without eating?

*18. Have you ever cheated on an examination?

19. Have you ever parked in a no-parking zone?

20. Did you ever pass another car on a blind hill or sharp curve?

21. Have you ever played a slot machine?

22. Have you ever tried to do something that friends told you was impossible?

23. When sick, have you ever deliberately avoided going to see a doctor?

*24. Have you ever told a lie?

25. Have you ever parked in a parking meter zone, knowing that you were going to be gone more than an hour?

26. Did you ever drive in the mountains during the winter?

27. Would you work strictly on a commission basis?

28. Have you ever tried to "bluff" your way through a situation about which you knew little or nothing?

29. Would you go on a severely restricted diet?

*30. Have you ever "cussed" anyone?

31. Have you ever driven a car when you had no liability insurance?

32. Have you ever increased your speed on icy streets?

33. Have you ever bet more money than you actually had at the time?

34. Have you ever taken a school examination without preparing for it?

35. Have you ever been for several nights together with little or no sleep?

36. Have you ever admitted a total stranger to your house without first checking his credentials?

37. Have you ever brought home more than the limit of fish or game?

38. Did you ever use charge accounts?

39. Would you apply for a job for which you are not qualified?

40. Would you accept a job in a country where medical facilities and doctors are limited.

41. Have you ever falsified information on an income tax return?

42. Given a chance, would you travel by airplane?

43. Have you ever written a check for more money than you had in the bank at the time?

44. Have you ever made a decision based upon little or no evidence?

45. If available, would you have eaten cranberries during the "cranberry scare"?

46. Have you ever deliberately broken a civil law?

47. Have you ever ridden a roller-coaster?

48. Have you ever played dice for money?

49. Have you ever "sneaked" to do something your parents told you not to do?

50. Have you ever been to a ball game or other outdoor activity in the rain?

51. Have you ever jaywalked during a period when fines were being given?

52. Have you ever walked at night alone through a "rough" neighborhood?

53. Would you buy speculative stock?

54. Have you ever been late for an appointment?

55. Have you ever gone for five years without seeing a doctor?

For the purposes of this study, students with a high willingness to risk locus of control choose F-frequently for all 50 items. Disregarding the five "Lie" items, it was possible for a student's score to range from zero (all N's) to one hundred (all f's)--the five lie items are marked with an (*) asterisk.

KEY: N = 0 S = 01 F = 02.

APPENDIX D

RESEARCH INVESTIGATION CONSENT FORM

RESEARCH INVESTIGATION CONSENT FORM

"I am doing a study of graduate students here at California State University, Northridge. I want to find out about your opinions and actions on a variety of topics. Please answer all of the questions using the answer sheet I have provided you. Try to work as fast as you can--it is not necessary to think too much about your answer.

Since I might be testing some of your colleagues, please do not disclose any information about these questionnaires.

_____
Signature of Participant

Thank you for your cooperation in participating in this research project. The investigator deeply appreciates your time and effort.